

View Source

Chapter 2 - HTML

Charles Severance
www.dr-chuck.com

These slides intended for use with the text book, “Building your Own Web Site the Right Way Using HTML & CSS” by Ian Lloyd, and Available from Sitepoint books.

Evolution of HTML

The Web is a Young Technology

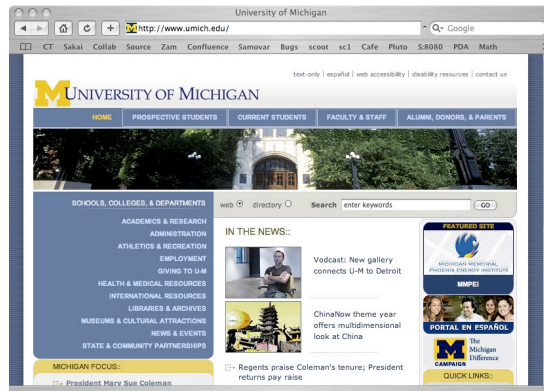
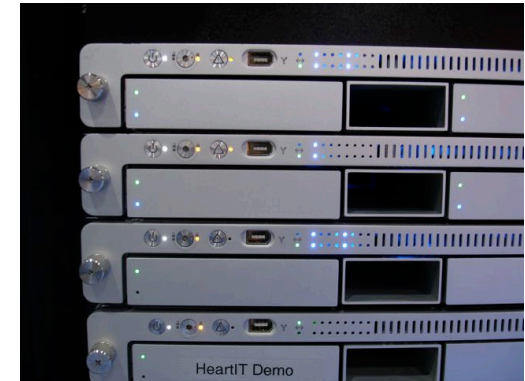
- Invented in early 1990's
- Popular in 1994
- Robert Cailliau -
coFounder of the World-
Wide-Web



<http://www.dr-chuck.com/media.php?id=70>

The big picture...

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
<head>
<title>University of Michigan</title>
....
```

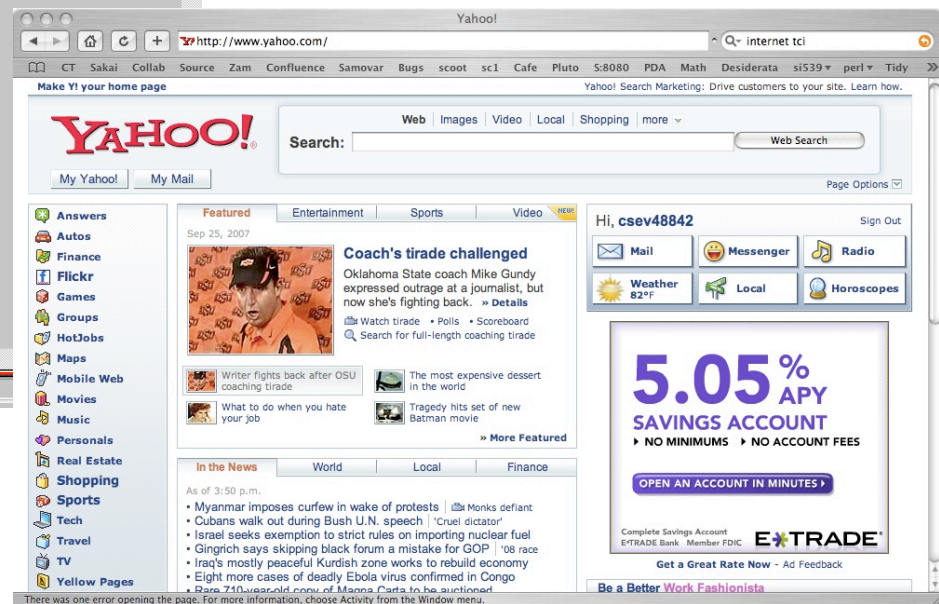


A web server produces HTML which is handed to a browser which needs to lay it out in a blink of an eye and have it pixel perfect as good as a print brochure.



1995

HTML has evolved a *lot* over the years - as computers and networks have gotten faster.



2007

An Iterative Process

- Designers want to do something
- They figure out how to do it with current generation browsers
- We figure out requirements - but HTML gets uglier and quirlier - then the HTML starts to break
- We develop new standards that handle new requirements in an elegant manner
- New Browsers arrive in the marketplace with the new standard

History of HTML / CSS

- HTML 1.0 - 1993 - The Good Old Days - life was simple
- HTML 2.0 - 1995 - Some interesting layout features - abused
- CSS 1 - 1996
- HTML 3.2 - 1997
- HTML 4.0 - 1997 - Layout moving toward CSS
- CSS Level 2 - 1998
- HTML 4.01 - 1999 - What we use today

HTML has evolved a **lot** over the years - as computers and networks have gotten faster.

The Good Old Days

```
<h1>Hello World</h1>
```

Hi there.

```
<p>
```

A Paragraph

```
<ul>
```

```
<li>List one
```

```
<li>List 2
```

```
</ul>
```

In the good old days you wrote HTML and browsers displayed it - since we wrote it by hand - and modems were slow - it was never too long and never too complex. The browser was never the rate limiting factor.

Writing HTML was like using a simple, weak word processor. The tags acted as formatting commands to the browser.

HTML Tag Basics

Start tag

End tag

`<h1>Hello World</h1>`

Tags “mark up” the HTML document. The tags are read and interpreted by the browser - but now shown.

Attribute

``

A self closing tag does not need a corresponding end tag.

Self-closing tag

The Ugly Middle Ages

- Web Designers designed to browser capabilities - down to particular minor versions of browsers.
- Extensive testing was needed on lots of browsers
- Designers used tables, nested tables, and chopped up graphics to gain control of the look and feel of web pages to produce a “print-like” experience.
- HTML was UGLY, Hard to develop, and brittle - what looked superb on one browser - often was broken on another browser - even a later release of the same browser.

The Modern Era

- HTML is clean and simple
- There is no presentation in HTML - font, color, spacing, etc etc
- No use of tables except for tabular data
- CSS controls all layout, and look and feel
- Still a bit challenging - but converging

What does this mean for us?

- Don't bother with the intermediate steps :)
- Either keep it simple - or do it well - simple does work
- If you want a professional site use all of the best practices
 - Presentation in CSS + Semantic markup in HTML
 - <http://validator.w3.org/>
 - <http://jigsaw.w3.org/css-validator/>

XHTML = HTML as XML

- close all tags
- nest tags appropriately
- lower case attribute names (onclick, selected, white-space...)
- no attribute shortcuts (selected vs selected="selected")
- http://www.w3schools.com/xhtml/xhtml_syntax.asp

This site contains a bunch of stuff including software, television shows, and other miscellaneous material. This also includes a number of activities and sites which I have done with my good friend Richard Wiggins.

Recent Video: Dr. Chuck Goes Motocross Racing
Funny Video: Mandy Birthday Project - Remix
Updated: Community Information Toolkit - Building Community Networks

Quick Links

Chuck's TV and Media
 Chuck's Talks
 Chuck's Book
 Chuck's Columns
 Resume and Bio
 Blog (20-Sep 10:01)
 Chuck's Papers

Sakai Project
 Sakai Planet Blog

Web/Multimedia sites

A Film About Brent and His ATV
 How to Install a hardwood floor in 4 minutes!
 Dr. Chuck goes motocross racing (2007)
 Dr. Chuck goes stock car racing (2002)
 Audition Tape which we sent to TechTV which was rejected :-(
 Making a Simple Cartoon Three short animations from Chuck and Brent.
 Nuthin' But Net A Television show
 NewsTalk 870 - Rich and I were on the radio once per month from the mid 90's through 2004.
 More Multimedia Projects...

Software Tools

P4P Image software for v300 and Trac-600 SMS
 ClipBoard-2000 - Distance Education Software
 Sync-O-Matic 2000 - Distance Education Software
 Other software Tools

Projects

Practical Home Networking - A book that Chuck and Rich almost got written. (Version 1, Version 2, Version 3, and Version 4)
 The Community Information Toolkit - A project to provide public libraries and other organizations a start on using Internet in Community Networking.

Photo log last update: September 24 2007 09:21:39 PM
Blog last update: September 20 2007 10:01:30 PM

Now Playing on Netfact TV

Online Lecture: HTML Overview

Production date: 1997 This lecture provides a basic overview of HTML and its use. This is a lecture from a fully-online course on the Internet and technology. Lecturer: Charles Severance Details: 50 minutes, Real Media 28kbps.

This is a randomly selected show from our library of shows - more shows will be added as they are digitized. You can view the entire collection here.

Sakai

W3C Markup Validation Service
 Check the markup (HTML, XHTML) of Web documents

Jump To: Important Warnings Validation Output

This page is not Valid (no Doctype found)!

Result: Failed validation, 47 Errors

Address:

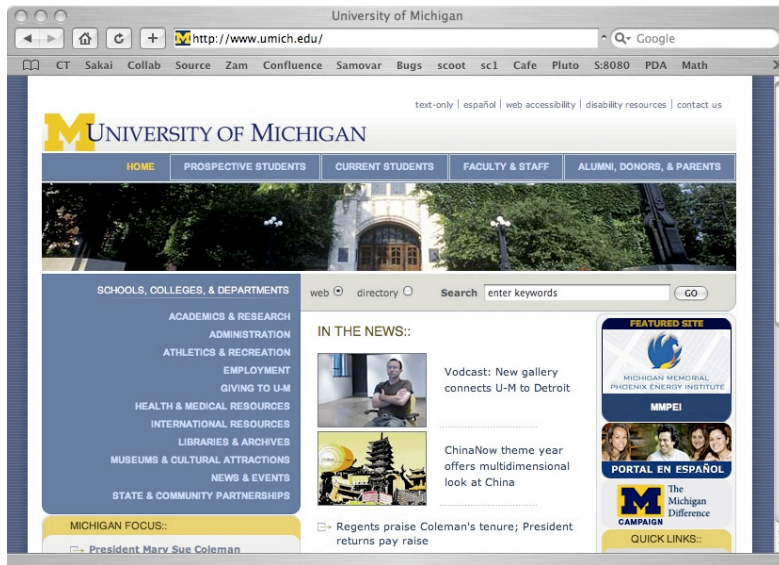
Encoding: utf-8 (detect automatically)

Doctype: (no Doctype found) (detect automatically)

Root Element: html

```
<HTML>
<HEAD>
  <META NAME="GENERATOR" CONTENT="Adobe PageMill 3.0 Win">
  <TITLE>dr-chuck.com </TITLE>
</HEAD>
<BODY BGCOLOR="#000000" LINK="#AAAAAA" VLINK="#AAAAAA" ALINK="#AAAAAA">
<table Border=0>
<tr>
...

```



Markup Validation Service
 Check the markup (HTML, XHTML) of Web documents

Jump To: [Congratulations](#) · [Icons](#)

This Page Is Valid XHTML 1.0 Strict!

Result:	Passed validation	
Address :	<input type="text" value="http://www.umich.edu/"/>	
Encoding :	iso-8859-1	<input type="button" value="(detect automatically)"/>
Doctype :	XHTML 1.0 Strict	<input type="button" value="(detect automatically)"/>
Root Element:	html	
Root Namespace:	http://www.w3.org/1999/xhtml	

```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://
www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
<head>
<title>University of Michigan</title>
....
  
```

Which DOCTYPE?

- Easy to start a fight - just Google “what is the best doctype”
 - Loose - legacy
 - Transitional - Mix of Developers
 - Strict - New Project which can enforce rules from the start
- <http://www.webmasterworld.com/html/3061635.htm> (and others)

A Simple but Modern Page

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>My Document Title</title>
    <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  </head>
  <body>
  </body>
</html>
```

HTML ELEMENTS

The Basic Outline

```
<!DOCTYPE ... >  
<html>  
  <head>  
    <!-- Describes and sets up the document -->  
  </head>  
  <body>  
    <!-- The document to be displayed -->  
  </body>  
</html>
```

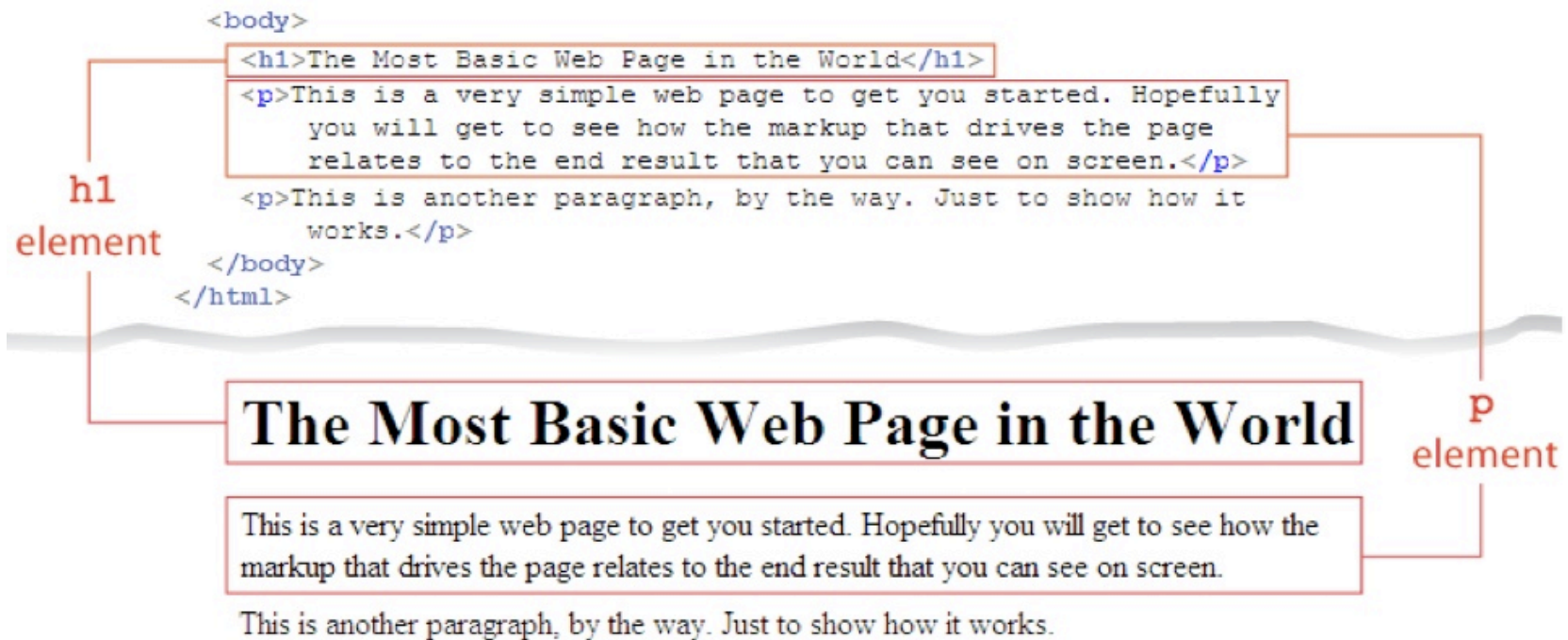
```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>The Most Basic Web Page in the World</title>
    <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  </head>
  <body>
    <h1>The Most Basic Web Page in the World</h1>
    <p>This is a very simple web page to get you started.
    Hopefully you will get to see how the markup that drives
    the page relates to the end result that you can see on
    screen.</p>
    <p>This is another paragraph, by the way. Just to show how it
    works.</p>
  </body>
</html>
```

Begin Tag

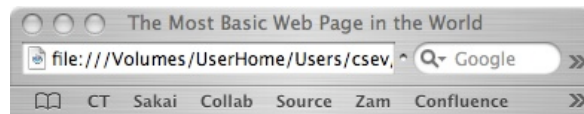
End Tag

Attribute

Whitespace and end lines do not matter except in attributes.



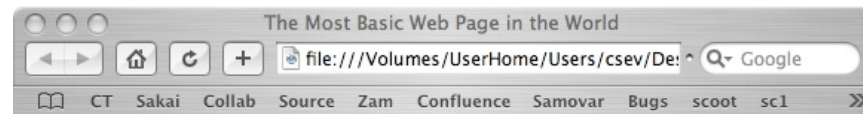
Browser Text Flow



The Most Basic Web Page in the World

This is a very simple web page to get you started. Hopefully you will get to see how the markup that drives the page relates to the end result that you can see on screen.

This is another paragraph, by the way. Just to show how it works.



The Most Basic Web Page in the World

This is a very simple web page to get you started. Hopefully you will get to see how the markup that drives the page relates to the end result that you can see on screen.

This is another paragraph, by the way. Just to show how it works.

The browser wraps lines based on its width - resizing the browser dynamically re-wraps lines.

Header Levels

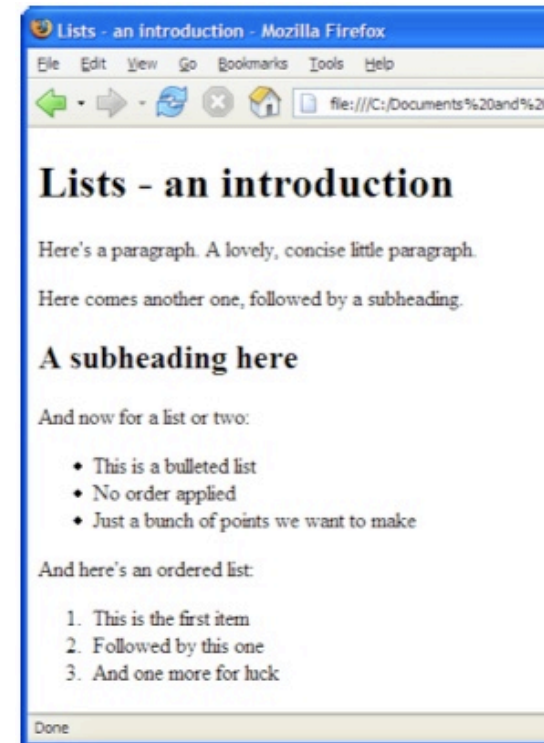
```
<h1>First Major Heading</h1>  
<h2>First Subheading</h2>  
<h2>Second Subheading</h2>  
<h3>A Sub-subheading</h3>  
<h1>Another Major Heading</h1>  
<h2>Another Subheading</h2>
```

- ❑ First Major Heading
 - ❑ First Subheading
 - ❑ Second Subheading
 - ❑ A Sub-subheading
- ❑ Another Major Heading
 - ❑ Another Subheading

Headers were very ugly in default rendering - most folks started with `<h3>`.

Lists

```
<body>
<h1>Lists - an introduction </h1>
<p>Here's a paragraph. A lovely, concise little paragraph.</p>
<p>Here comes another one, followed by a subheading.</p>
<h2>A subheading here</h2>
<p>And now for a list or two:</p>
<ul>
  <li>This is a bulleted list</li>
  <li>No order applied</li>
  <li>Just a bunch of points we want to make</li>
</ul>
<p>And here's an ordered list:</p>
<ol>
  <li>This is the first item</li>
  <li>Followed by this one</li>
  <li>And one more for luck</li>
</ol>
</body>
```



With CSS layout - lists are lists.


```
<body>
  <p>I really, <em>really</em> like this XHTML stuff.</p>
  <!-- Added emphasis using the em element. Handy one, that! -->
</body>
```

```
<body>
<h1>Current Stock</h1>
<p>The following items are available for order:</p>
<ul>
<li>Dark Smoke Window Tinting</li>
<li>Bronze Window Tinting</li>
<!-- <li>Spray mount</li>
<li>Craft knife (pack of 5)</li> -->
</ul>
</body>
```

Comments

Symbols

<body>

<p>Our current stock of craft knives > our stock of spray
mounts, but we still need to get both of them in as soon
as possible!</p>

</body>

Entity	Symbol
>	>
<	<
&	&
£	£
©	©
™	™

Images

```
<h2>Welcome to our super-duper Scuba site</h2>
<p></p>
<p>Glad you could drop in and share some air with us! You've
passed your underwater navigation skills and successfully
found your way to the start point - or in this case, our home
page.</p>
```

In this case, the file divers-circle.jpg needs to be in the same directory as the file index.html.

<h2>Welcome to our super-doooper Scuba site</h2>

<p></p>

<p>Glad you could drop in and share some air with us! You've passed your underwater navigation skills and successfully found your way to the start point - or in this case, our home page.</p>

Welcome to our super-doooper Scuba site



Glad you could drop in and share some air with us! You've passed your underwater navigation skills and successfully found your way to the start point - or in this case, our home page.

Begin Tag

Where to find the image

```

```

Optional - makes
display quicker.
Will resize to fit.

End Tag

Show this when hovering, images are off, or for
screen readers.

All information is communicated through the attributes of the img tag.

Paragraphs and Divs

`<p>This is a paragraph.</p>`

`<div>This looks like a paragraph, but it's actually a div.</div>`

`<p>This is another paragraph.</p>`

`<div>This is another div.</div>`

This is a paragraph.

This looks like a paragraph, but it's actually a div.

This is another paragraph.

This is another div.

Think

This is a paragraph.
This looks like a paragraph, but it's actually a div.
This is another paragraph.
This is another div.

div as Container

```
<div>  
  <p>This is a paragraph inside a div.</p>  
  <p>So is this.</p>  
</div>
```

```
<div id="header">  
  <h1>BubbleUnder.com</h1>  
  <p>Diving club for the south-west UK</p>  
</div>
```

“div” stands for “division” as it allows us to divide our page into parts or sections and then do something different with each “section”.


```

<body>
<div id="header">
<div id="sitebranding">
  <h1>BubbleUnder.com</h1>
</div>
<div id="tagline"
  <p>Diving club for the south-west UK - let's make a
  splash!</p>
</div>
</div> <!-- end of header div -->
<div id="bodycontent">
  <h2>Welcome to our super-doooper Scuba site</h2>
  <p></p>
  <p>Glad you could drop in and share some air with us!
  You've passed your underwater navigation skills and
  successfully found your

```

```

  way to the start point - or in this case, our home
  page.</p>
  <h3>About Us</h3>
  <p>Bubble Under is a group of diving enthusiasts based
  in the south-west UK who meet up for diving trips in
  the summer months.</p>
  <p>When we're not diving, we often meet up in a local
  pub to talk about our recent adventures (any excuse,
  eh?).</p>
  <h3>Contact Us</h3>
  <p>To find out more, contact Club Secretary Bob
  Dobalina on 01793 641207 or
  <a href="mailto:bob@bubbleunder.com">email
  bob@bubbleunder.com</a>.</p>
</div> <!-- end of bodycontent div -->
</body>

```

Indicating Meaning

Multiple Files

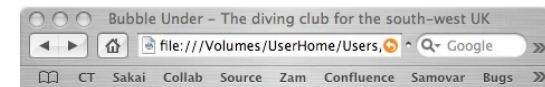
```
si-csev-mbp:~/Desktop/sample/split csev$ ls -l
total 128
-rw-r--r--  1 csev  csev    1487 Sep 26 04:41 about.html
-rw-r--r--  1 csev  csev     959 Sep 26 04:39 contact.html
-rw-r--r--  1 csev  admin 51747 Sep 26 04:41 divers-circle.jpg
-rw-r--r--  1 csev  csev   1169 Sep 26 04:39 index.html
si-csev-mbp:~/Desktop/sample/split csev$
```

Special File Names

- When a URL points to a directory in your web server, it looks for a file with a special name:
 - index.html, index.htm, index.php, default.htm, etc..
- While there is a convention, the “default file” is configurable - so nothing is “sure”
- Usually index.htm or index.html is a safe bet
- This only works when viewing through a web server - when viewing from disk, you must view the file.

Links Between Files

```
<div id="sitebranding">
<h1>BubbleUnder.com</h1>
</div>
<div id="tagline">
<p>Diving club for the south-west UK - let's make a splash!</p>
</div>
</div> <!-- end of header div -->
<div id="navigation">
<ul>
<li><a href="index.html">Home</a></li>
<li><a href="about.html">About Us</a></li>
<li><a href="contact.html">Contact Us</a></li>
</ul>
</div> <!-- end of navigation div -->
<div id="bodycontent">
<h2>Welcome to our super-doooper Scuba site</h2>
<p></p>
<p>Glad you could drop in and share some air with us! You've
```



BubbleUnder.com

Diving club for the south-west UK - let's make a splash!

- [Home](#)
- [About Us](#)
- [Contact Us](#)

Welcome to our super-doooper Scuba site



Glad you could drop in and share some air with us! You've passed your underwater navigation skills and successfully found your way to the start point - or in this case, our home page.

Link Anatomy

Start Tag

Clickable Text

End Tag

```
<a href="about.html"> About Us </a>
```

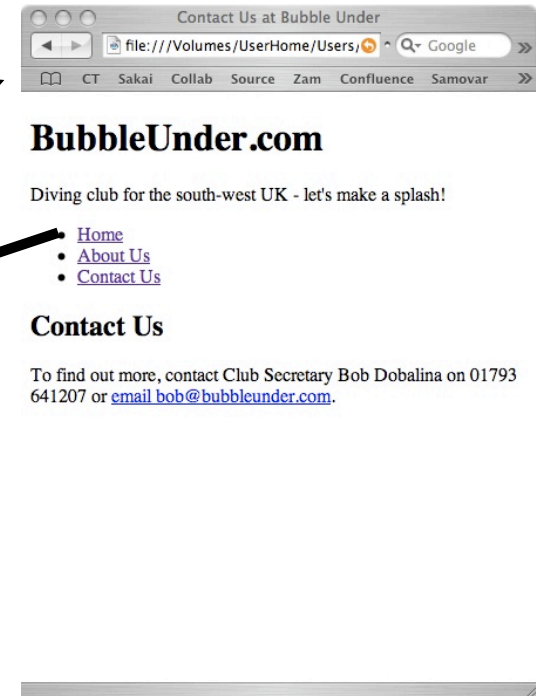
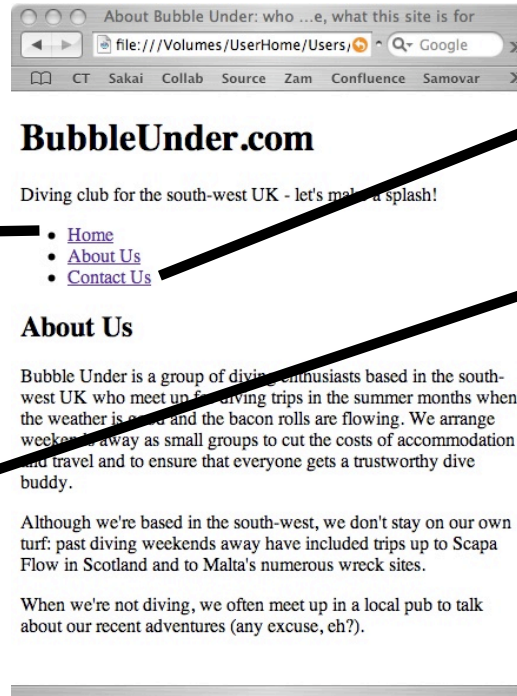
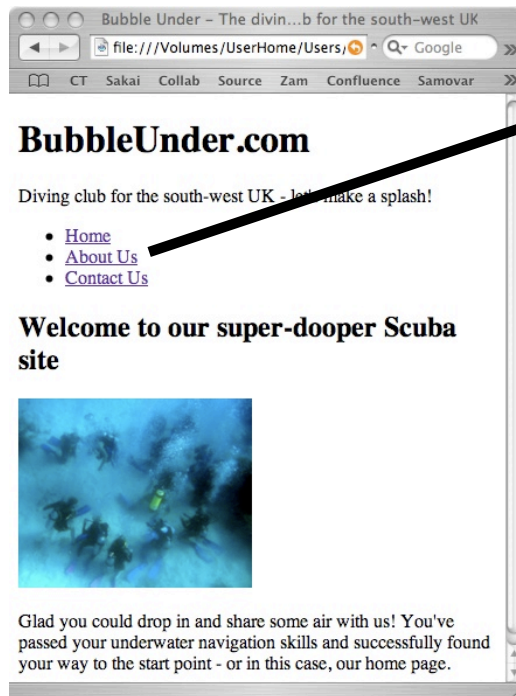
Where to go when link is
clicked (an attribute).

Diving club for the south-west UK

- [Home](#)
- [About Us](#)
- [Contact Us](#)

We will make this pretty later with CSS.

Navigating



E-Mail Links

<p>To find out more, contact Club Secretary Bob Dobalina on 01793 641207 or

email
bob@bubbleunder.com.

</p>

Contact Us

To find out more, contact Club Secretary Bob Dobalina on 01793 641207 or [email bob@bubbleunder.com](mailto:bob@bubbleunder.com).

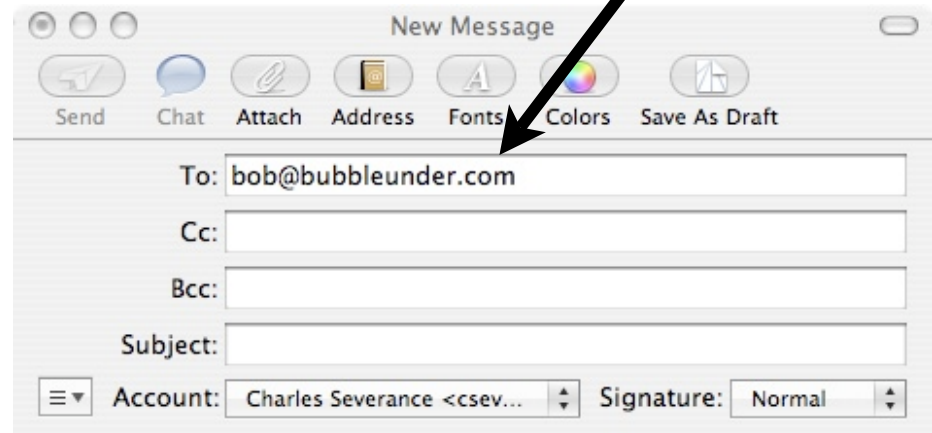
When this link is clicked on, the browser pops up a mail client with the TO: filed in. We assume the user has a mail client.

`
email bob@bubbleunder.com.`

Contact Us

To find out more, contact Club Secretary Bob Dobalina on 01793 641207 or [email bob@bubbleunder.com](mailto:bob@bubbleunder.com).

The To: address comes from the href, not the clickable text.



The screenshot shows a 'New Message' window with a toolbar at the top containing icons for Send, Chat, Attach, Address, Fonts, Colors, and Save As Draft. Below the toolbar, the 'To:' field is filled with 'bob@bubbleunder.com'. The 'Cc:', 'Bcc:', and 'Subject:' fields are empty. At the bottom, there is an 'Account:' dropdown menu showing 'Charles Severance <csev...>' and a 'Signature:' dropdown menu showing 'Normal'.

Charles Severance
csev@umich.edu www.dr-chuck.com

Block Quotes

```
<blockquote>
```

```
<p>"Happiness is a dip in the ocean followed by a pint or two of  
Old Speckled Hen.You can quote me on that!"</p>
```

```
</blockquote>
```

```
<blockquote cite="http://www.petermoore.net/sftb/chapter1.htm">
```

```
<p>It didn't take long for a daily routine to form: when they  
left for work in the morning I'd still be in bed.And when  
they came home they'd find me sitting on the sofa, drinking  
beer and watching TV soaps.</p>
```

```
</blockquote>
```

Strong and Emphasis

<p>Although Jimmy was told to never
put his hands on the exhaust pipe, he still
couldn't help himself.</p>

Never assume that strong is bold and
emphasis is *italics*. Use these tags to mark
meaning not formatting!

Although Jimmy was told to
never put his hands on the
exhaust pipe, he *still* couldn't
help himself.

Break Tags

`<p>`The limerick packs laughs anatomical,`
`
Into space that is quite economical.`
`
But the good ones I've seen,`
`
So seldom are clean,`
`
And the clean ones so seldom are comical.`</p>`

Use `
` when the break is part of meaning - do not use to manually flow text.

Some bad HTML..

```
<font size=-1 face=arial color=white>
<font face=Arial>
Now Playing on Netfact TV
<br>&nbsp; <br>
<img src=tci.gif>
&nbsp; <br>
<font color=yellow><br>
Nuthin' But Net Show #6
</font><br>&nbsp; <br>
...
</font>
</a>
<p>
<font size=-2 color=white>
This is a randomly selected show from our
library of shows - more shows will be added as
they are digitized.
```

```
<font color=orange>
Updated:
<a href=http://www.dr-chuck.com/media.php?
comment=top&id=39>
<font color=white>
Community Information ToolKit - Building
Community Networks
</font>
</a>
</font>
<BR>
<BR> &nbsp; <br>
```

Quick Advertisement - Firefox

- You pretty much need to use Firefox for serious website development
- Important plugins:
 - Web Developer - Chris Pedrick
 - FireBug - Joe Hewitt


<http://addons.mozilla.org/>

dr-chuck.com

http://www.dr-chuck.com/

Latest Headlines Sakai dr-chuck.com NWA Chuck's Media Sakai Based Service... iPhone Navigation Personal Learning an...

Disable Cookies CSS Forms Images Information Miscellaneous Outline Resize Tools View Source Options


 Charles Severance

Quick Links

- Chuck's TV and Media
- Chuck's Talks
- Chuck's Book
- Chuck's Columns
- Resume and Bio
- Blog (26-Nov 11:44)
- Chuck's Papers

UM School of Information

Sakai Planet Blog

 More of dr-chuck's photos

www.flickr.com

This site contains a bunch of stuff including software, tele... miscellaneous material. This also includes a number of activities and s... my good friend Richard Wiggins.

Recent Video: John Merlin Williams Goes Street Racin

Recent Video: Dr. Chuck Goes Motocross Racing on hi

Teaching

- SI 182 - Building Applications for Information Environments
- SI 539 - Design of Complex Web Sites (Rails)
- SI 543 - Introductory Programming (Java) (Login)

See also www.rubylearn.com and my raw course podcasts

Web/Multimedia sites

- A Film About Brent and His ATV
- How to Install a hardwood floor in 4 minutes!
- Dr. Chuck goes motocross racing (2007)
- Dr. Chuck goes stock car racing (2002)
- Audition Tape which we sent to TechTV which was rejected :(. Making a Simple Cartoon Three short animations from Chuck and Brent.
- Nuthin' But Net A Television show
- NewsTalk 870 - Rich and I were on the radio once per month from the mid 90's through 2004.
- More Multimedia Projects...

Software Tools

- PHP Image software for v300 and Treo-600 SMS
- ClipBoard-2000 - Distance Education Software
- Sync-O-Matic 2000 - Distance Education Software
- Other software Tools

Projects

- Practical Home Networking - A book that Chuck and Rich almost got written. (Version 1,

Outline Frames

Outline Headings

Outline Links

Outline Tables

Outline Block Level Elements

✓ Outline Deprecated Elements

Outline Positioned Elements

Outline Current Element

Outline Custom Elements...

✓ Show Element Names When Outlining

Sakai Planet Blog

Produced: June 6, 2006 This video was taped while are the Sakai meeting in Vancouver. Johan discusses their upcoming project to integrate uPortal and Sakai to produce the UNISA campus portal. Johan attended both the Sakai and JA-Sig meetings and described the UNISA approach to both communities. Details: 3 minutes, Windows Media 300 kbps.

This is a randomly selected show

Done

Summary

- HTML has gone through many changes and evolutions
 - It started clean and simple - then got ugly and nasty - now we are back to a clean and simple approach
- HTML Markup needs to focus on meaning - not formatting
- Formatting is handled using CSS - Cascading Style Sheets